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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,289	10/07/2003	Hiroaki Nemoto	HITA.0443	4034

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EXAMINER
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KIM, PAUL D

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/679,289	<b>Applicant(s)</b> NEMOTO, HIROAKI	
	<b>Examiner</b> Paul D. Kim	<b>Art Unit</b> 3729	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 09/920,644.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/7/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: The reference number "310" as shown in Fig. 3I does not mentioned in the description. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Re. "BRIEF DESCRIPTION OF THE DRAWINGS": There is no 'Fig. 1' in the drawings. Fig. 1 has to be changed to --Fig. 1A to Fig. 1E'--.

In addition, 'Fig. 3', "Fig. 8", Fig. 9", "Fig. 10", Fig. 12" and "fig 15" need to be corrected as set forth above.

4. The abstract of the disclosure is objected to because the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The phrase "the magnetic shield part and the flux guide tip exposed on the air bearing surface are split by photolithograph or etching" as recited in lines 5-7 of claim 3 does not describe in the specification.

Appropriate correction is required.

### ***Claim Objections***

6. Claims 1-3 are objected to because of the following informalities:

Re. Claim 1: The phrase "the basic surface" as recited in line 7 appears to be --a basic surface--.

The phrase "the magnetic shield part" as recited in line 9 appears to be --a magnetic shield part--.

The phrase "the height" as recited in line 10 appears to be --a height--.

The phrase "the distance" recited in line 11 appears to be --a distance--.

Re. Claim 3: The phrase "the air bearing surface" as recited in line 2 appears to be --an air bearing surface--.      Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "the same film formation process" as recited in line 6 renders the claim vague and indefinite. It is unclear as to what the same film formation process is indicated.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 3729

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takada et al. (U SPAT. 5,963,385) in view of Applicant Admitted Prior Art (hereinafter as APA).

Fig. 15 of Takada et al. teach a process of making a magnetic head comprising steps of: forming a lower non-magnetic film (equivalent with an insulating film, 114) over a substrate (115); forming a lower gap film (120) over the lower non-magnetic film; forming a flux guide (117) and an MR element (118); forming an upper gap film (equivalent with an insulating film, 114) over the flux guide and MR element; and forming magnetic shields (116) wherein at least the magnetic shield part is formed on a basic surface of the magnetic head (111) opposite a magnetic recording medium (61A), and a height of the magnetic shields appears to be less than a distance from the air bearing surface to the MR element as shown in Fig. 15 (see also col. 12, lines 7-37), wherein Takada et al. teach that the flux guide and MR element are embedded in the insulating film (114).

According to Fig. 15 of Takada et al., the magnetic head is flattened by the air bearing surface opposite to the magnetic recording medium. However, Takada et al. do not describe how to form the surface is flattened. APA teaches a process of forming a magnetic head including a process of grinding a slider (equivalent with a magnetic head element) to determine the air bearing surface as shown in Fig. 1E (paragraph [13], lines 15-21). It is meant that the head element is cut and machined or ground into the air

Art Unit: 3729

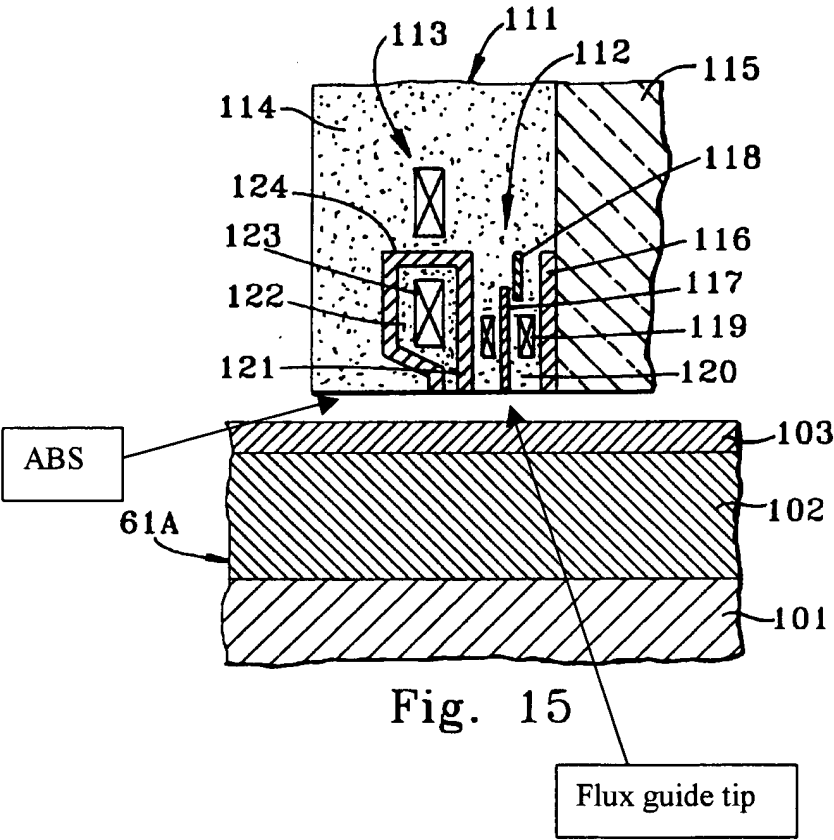
bearing surface as a basic surface to be opposite the magnetic recording medium.

Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify a process of fabricating a magnetic head of Takada et al. by cutting and machining or grinding the magnetic head element as taught by APA in order to define the air bearing surface of the magnetic head.

In addition to that, in the manufacturing the read head, the process of cutting and machining or grinding the magnetic head element to determine the air bearing surface of the magnetic head element is well known in the art.

As per claim 2 a non-magnetic gap layer (equivalent with an insulating film, 114) is formed over the magnetic shields and a recording head (121-124) is formed by a planar process, wherein the recording head includes a pair of magnetic poles (121,124) via the gap layer (equivalent with an insulating film, 114) wherein the magnetic shield is formed first follow by the non-magnetic layer from the recording head.

As per claim 3 a flux guide tip is formed after machining the cut surface into the air bearing surface as the basic surface opposite the magnetic recording medium, wherein at least the magnetic shield part and the flux guide tip are formed over the air bearing surface of the magnetic head, wherein the magnetic shield part and the flux guide tip exposed on the air bearing surface are fabricated by etching (equivalent with grinding).





***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 6:00 AM to 2:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim  
Examiner  
Art Unit 3729